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Update on Pest Management
and Crop Development

F R U I T J O U R N A L

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Geneva, NY

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FIRST FLIGHT

❖❖ Beginning with today's issue, we will once again be publishing pest predictions generated by the Univ. of Maine's Orchard Radar model estimation service, provided to us by Glen Koehler. This pest management tool uses commercially available weather data as an input for apple pest occurrence and development models taken from many established university and practitioner sources. It's offered as another perspective on what's happening in the orchard to compare against our own record-generated advisories and, of course, personal observations from the field. We'll be printing only some of the short-term arthropod events; the full Orchard Radar product range covers disease and horticultural events as well. The public New England sites available for anyone to use are located at: <http://pronewengland.org/AllModels/DecisionModels.htm>. Growers interested in exploring this service for their specific site may wish to contact Glen personally (glen.koehler@maine.edu).❖❖

Geneva Predictions:

Roundheaded Appletree Borer

RAB egg laying begins: June 2. Peak egg laying period roughly: June 24 to July 9.

Dogwood Borer

First DWB egg hatch roughly: June 20.

Codling Moth

1st generation, first sustained trap catch biofix date: May 7.
Codling moth development as of May 7: 1st generation adult emergence at 1% and 1st generation egg hatch at 0%.

Lesser Appleworm

Peak LAW trap catch: May 12.

ORCHARD RADAR DIGEST



Mullein Plant Bug

Expected 50% egg hatch date: May 4, which is 7 days before rough estimate of Red Delicious petal fall date.

The most accurate time for limb tapping counts, but possibly after MPB damage has occurred, is when 90% of eggs have hatched.

90% egg hatch date: May 10.

Obliquebanded Leafroller

1st generation OBLR flight, first trap catch expected: June 3.

Oriental Fruit Moth

1st generation 55% egg hatch and first treatment date, if needed: May 21.

San Jose Scale

First adult SJS caught on trap: May 10.

Spotted Tentiform Leafminer

1st generation sapfeeding mines start showing: May 11.
Optimum sample date is around May 12, when a larger portion of the mines have become detectable.

White Apple Leafhopper

1st generation WALH found on apple foliage: May 3.

IN THIS ISSUE...

INSECTS

- ❖ Orchard Radar Digest
- ❖ Direct pests of concern at petal fall

PHENOLOGIES

PEST FOCUS

INSECT TRAP CATCHES

UPCOMING PEST EVENTS

DIRECT APPROACH

REMAINS OF THE
DAY
(Art Agnello,
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activity of a single sawfly larva can injure all the fruit in a cluster, causing stress on that fruit to abort during the traditional "June drop" period.

Certain insecticides that control this pest also adversely affect bees, which can pose a problem at petal fall because certain apple varieties lose their petals before others. In blocks of trees where petal fall has occurred on one variety but not the others, the variety that has lost its petals is likely to sustain some curculio or sawfly injury until an insecticide is applied. Some newer insecticides with activity against both plum curculio and sawfly -- Calypso, Avaunt and Actara -- may have a slight advantage over conventional OPs in this case. Assail represents another option for controlling sawfly; it's not very active against plum curculio, but will do a good job against rosy apple aphid and spotted tentiform leafminer, as well as sawfly, at this timing. To minimize the hazard to honey bees, apply any pesticide only when no bees are actively foraging on blooming weeds (evening is better than early morning).

❖❖ We still haven't progressed far enough to know just how much viable fruit there is on the trees this season, but some early indications suggest that, at least in some locations, there may be more than first predicted. Most sites in western NY have yet to actually complete petal fall, and even in the Hudson Valley, the picture is far from clear. As advised last week, the decision of what to do about protecting the remaining fruits will need to be based on careful inspection after (probably) still more waiting. Proceeding on the assumption that the insects of most concern in planning any petal fall sprays will be those directly attacking the fruits, here's a brief review of the guidelines for addressing the other pests normally included in this category besides plum curculio (covered last week):

European Apple Sawfly

This primitive bee and wasp relative shows a preference for early or long-blooming varieties with a heavy set of fruit. This insect is generally a pest mainly in eastern N.Y., although it has been gradually making its presence known in the more western sites, recently progressing as far as Wayne Co. (or beyond). The adult sawfly emerges about the time apple trees come into bloom and lays eggs in the apple blossoms. Young larvae begin feeding just below the skin of the fruits, creating a spiral path usually around the calyx end. This early larval feeding will persist as a scar that is very visible at harvest. Following this feeding, the larva usually begins tunneling toward the seed cavity of the fruit or an adjacent fruit, which usually causes it to abort. As the larva feeds internally, it enlarges its exit hole, which is made highly conspicuous by a mass of wet, reddish-brown frass. The frass may drip onto adjacent fruits and leaves, giving them an unsightly appearance. The secondary feeding

continued...

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Obliquebanded Leafroller

Larvae overwintering as 1st or 2nd stage caterpillars may have had the ability to grow to a noticeable size, although we haven't actually seen any up to this point, so most are likely still relatively small. While you're assessing bud viability, it would be prudent to have a quick look for later-stage larvae in problem blocks to determine whether a treatment against the overwintered brood should be included in your petal fall plans. Scout the blossom clusters or foliar terminals for larvae feeding within both the flowers and rolled leaves; a 3% infestation rate could justify an application to minimize overwintered fruit damage and help reduce summer populations.

Among the selective insecticides available, Intrepid has been successful at this timing, and B.t. products, which can be used while blossoms are still present, include Dipel, Deliver, Agree, Biobit and Javelin. More recently, Proclaim has been shown to be very effective at the petal fall timing, and also provides activity against early season mite populations. Delegate, Altacor, and Belt all offer very good efficacy against not only OBLR, but also the internal leps. Pyrethroids such as Asana, Baythroid, Danitol, War-

rior, Proaxis or Leverage may also be effective, depending on past use history, but be aware of their broad-spectrum effects, which can work both for and against you, according to your approach to conserving beneficial mites and insects.

Oriental Fruit Moth

Biofix will be very spread out across NY again this year, with most WNY sites yet to record any moth captures; moderate temperatures forecast for this week will likely continue the indistinct pattern of emergence in most sites. Use the NEWA Apple Insect Models page to chart current degree day (base 45°F) progress towards the recommended totals of 170 (in peaches) and 350 (in apples) as the timing at which to apply a protective spray. To maximize the efficacy of 1st brood control, peach growers should use one of the suggested options from the Recommends starting at petal fall, backed up 10–14 days later. In apples, in addition to Delegate, Altacor, and Belt, a number of the petal fall selection of insecticides will do an acceptable job of controlling this generation, including the OPs, pyrethroids, Intrepid, Assail, Avaunt, and Calypso. ❖❖

INSECT TRAP CATCHES (Number/Trap/Day)

	Geneva, NY			Highland, NY		
	<u>4/30</u>	<u>5/4</u>	<u>5/7</u>	<u>4/30</u>	<u>5/7</u>	
Redbanded leafroller	3.0	15.5	9.3	Redbanded leafroller	4.2	1.3
Spotted tentiform leafminer	2.5	8.0	4.7	Spotted tentiform leafminer	25.4	6.3
Oriental fruit moth	0.3	4.7	5.2	Oriental fruit moth	10.6	3.9
American plum borer	0.0	0.0	0.3*	Codling moth	0.0	1.4*
Lesser appleworm	0.0	0.0	0.0	Lesser appleworm	0.0	1.0*
San Jose scale	0.0	1.3*	0.3	Tufted apple budmoth	0.0	0.1
Codling moth	0.0	0.3*	1.2	Fruittree leafroller	0.0	0.0
* first catch						

PEST FOCUS

Geneva: 1st **codling moth** and **San Jose scale** trap catches 5/4. 1st **American plum borer** trap catch today, 5/7.

Highland: 1st **lesser appleworm** trap catch 4/29. 1st **codling moth** trap catch today, 5/7.

PHENOLOGIES

Geneva:

Apple (McIntosh): petal fall

Apple (Red Delicious): 95% petal fall

Apple (Empire): petal fall

Peach: fruit set, shuck split

Sweet cherry: fruit set

Plum: fruit set, shucks on

Highland:

Apple(Golden Delicious, Red Delicious, Empire, McIntosh): fruit >8mm



UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–5/7/12):	491	261
(Geneva 1/1–5/7/2011):	294	136
(Geneva "Normal"):	345	173
(Geneva 1/1–5/14 predicted):	598	324
(Highland 1/1–5/7/12):	637	328
(Highland 1/1–5/7/11):	390	192
<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
European red mite 1st summer eggs	447–555	237–309
Oriental fruit moth 1st flight peak	352–550	178–294
Spotted tentiform leafminer sap-feeders present	343–601	165–317
Lesser appleworm 1st flight peak	355–773	174–440
Mullein bug 90% hatch	472–610	247–323
Lesser peachtree borer 1st catch	482–684	251–379
Plum curculio oviposition scars present	485–589	256–310
Pear psylla hardshell present	493–643	271–361
San Jose scale 1st flight peak	554–746	294–418
McIntosh fruit set	510–600	266–326

NOTE: Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide.

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